

NIOSH Musculoskeletal Disorders Prevention Program

May 2016

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Musculoskeletal Disorders Prevention Program works with partners in industry, labor, trade associations, professional organizations, and academia to prevent work-related musculoskeletal disorders (MSDs). MSDs are soft-tissue injuries caused by sudden or sustained exposure to repetitive motion, force, vibration, and awkward positions.

What do we do?

- **Surveillance:** Locate and use unique sources of surveillance data (including surveys, insurance and workers compensation data), to identify and prioritize areas of needed MSD research for underserved worker populations.
- **Intervention Effectiveness:** Develop and evaluate cost-effective interventions to prevent or minimize MSDs in the workplace. Many jobs with a high rate of MSDs (e.g., manual material handlers, nursing assistants, and hotel housekeepers) do not have effective programs, technologies, and strategies available to prevent MSDs.
- **Communication:** Share new information, control technologies, and prevention methods through a variety of formats tailored to the needs of specific worker and employer populations.

What have we accomplished?

- Awarded funding to eight projects through an internal NIOSH competition that will address surveillance, intervention development, and communication needs.
- Responded to an ergonomic and MSD-focused Health Hazard Evaluation request at a poultry processing plant. The NIOSH evaluation revealed that 81% of the jobs involved levels of hand repetition and force that were above the American Conference of Governmental Industrial Hygienists Hand Action Limit. Also, 1 in 3 workers (34%) had evidence of carpal tunnel syndrome.
- Published the guidance document "Observation-based Posture Assessment: Review of Current Practice and Recommendations for Improvement," which helps practitioners assess working posture and prevent MSDs.

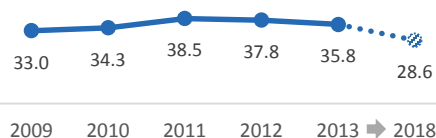
What's next?

- Administer a survey to three global professional ergonomist associations to study how NIOSH risk assessment tools are being used.
- Evaluate workplace interventions for return on investment and for the effectiveness of reducing MSDs in collaboration with the Ohio Bureau of Worker's Compensation and other programs.
- Complete a study on lower extremity MSDs in construction workers.
- Use data from the National Health Interview Survey to study how often MSDs occur.
- Publish the preliminary findings on the effectiveness of consumer-focused wearable electronic health devices to collect MSD exposure data.
- Publish four MSD-focused communication products for Hispanic small business owners, addressing cost effective workplace interventions.

At-A-Glance

The mission of the Musculoskeletal Disorders Prevention Program is to reduce work-related musculoskeletal disorders (MSDs), such as carpal tunnel syndrome and low back pain. This snapshot shows recent accomplishments and upcoming work.

Rate of lost workdays due to musculoskeletal disorders, per 10,000 workers, all sectors



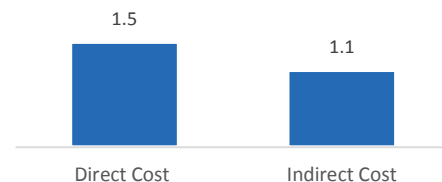
Source: U.S. Bureau of Labor Statistics

Lost workday musculoskeletal disorder rate per 10,000 workers



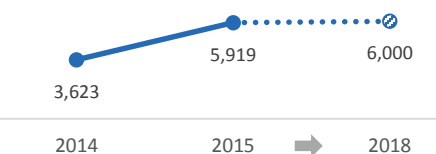
Source: U.S. Bureau of Labor Statistics

Estimated cost of musculoskeletal disorders, 2007 (in billions of dollars)



Source: Bhattacharya A [2014]. Costs of occupational musculoskeletal disorders (MSDs) in the United States. *Int J Ind Ergon* 44(3):448-454.

Cumulative web downloads of "Observation-Based Posture Assessment" guidance document



Source: NIOSH program records